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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,570	03/11/2004	Ralph Brinkhof	081468-0308684	4827
909	7590	06/30/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			KIM, PETER B	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	

2851

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/797,570

Applicant(s)

BRINKHOF ET AL.

Examiner

Peter B. Kim

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>32004</u> , <u>32004</u> | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed Mar. 14, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

A copy of European Search Report is not found in the file.

### ***Claim Objections***

Claim 3 is objected to because of the following informalities: "one go" is not clear. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-17, and 19-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimoto (6,245,585).

Fujimoto discloses a method for determining at least one of tilt and height of a surface of substrate and a lithographic projection apparatus comprising an assembly (Fig. 1) for determining at least one of tilt and height of a surface of a substrate (109) comprising a radiation system (100), a support structure (104) to support a patterning structure (105), a substrate table (110) configured to support a substrate (109), a projection system (108) and the assembly comprising a sensor (131) configured to measure at least one of tilt and height in more than three different positions (Fig. 3), and a memory (141) to store measurement data for use during a later exposure of the substrate wherein at least one path is partly incline with respect to an exposure scanning direction (col. 5, lines 21-col. 6, line 17, Fig. 3). Fujimoto also discloses measuring tilt and height along at least part of an edge contour of substrate (Fig. 6, col. 6, lines 44-67). Fujimoto discloses a sensor including a plurality of sensing spots (Fig. 2) and sensor being switchable between an on and an off state (Fig. 3). Fujimoto also discloses using the measurement data to adjust a position of the substrate to bring the target portion optimally in the focal plane of the radiation beam (Fig. 3, steps 209, 210).

Claims 1-30 are rejected under 35 U.S.C. 102(a) as being anticipated by Wakamoto (2003/0058423).

Wakamoto discloses a method for determining at least one of tilt and height of a surface of substrate and a lithographic projection apparatus comprising an assembly (Fig. 2) for determining at least one of tilt and height of a surface of a substrate (12W) comprising a radiation system (1), a support structure (15) to support a patterning structure (11), a substrate table (19) configured to support a substrate (12W), a projection system (13) and the assembly

Art Unit: 2851

comprising a sensor (45) configured to measure at least one of tilt and height in more than three different positions (Fig. 3A), and a memory (17) to store measurement data for use during a later exposure of the substrate wherein at least one path is partly incline with respect to an exposure scanning direction (para 0080, 0081). Wakamoto also discloses measuring tilt and height along at least part of an edge contour of substrate (Fig. 4, 5, 6, 7). Wakamoto discloses a sensor including a plurality of sensing spots (Fig. 3A) and sensor being switchable between an on and an off state (Fig. 4-7). Wakamoto also discloses using the measurement data to adjust a position of the substrate to bring the target portion optimally in the focal plane of the radiation beam (para 0080, 0081). Wakamoto discloses the sensor configured to approximate geometry of the edge contour during a measurement (Fig. 6).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim  
Primary Examiner  
Art Unit 2851

June 23, 2005